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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,157	10/18/2006	Gerd Kleideiter	SANZ-278	6959
24972	7590	01/05/2009		
FULBRIGHT & JAWORSKI, LLP			EXAMINER	
666 FIFTH AVE			XU, LING X	
NEW YORK, NY 10103-3198			ART UNIT	PAPER NUMBER
			1794	
			MAIL DATE	DELIVERY MODE
			01/05/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/589,157

**Applicant(s)**

KLEIDEITER ET AL.

**Examiner**

Ling Xu

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-850)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date See Continuation Sheet

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :10/15/2007, 9/18/2006 and 8/10/2006.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 24 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 24 depends on claim 13. Claim 13 recites that the dielectric oxide layer selected from the group consisting of Al<sub>2</sub>O<sub>3</sub>, SnO, TiO<sub>2</sub> and SiO<sub>2</sub>. However, claim 24 recites that the dielectric oxide layer comprising Nb<sub>2</sub>O<sub>5</sub>, which is not one of the metal oxides listed in the Markush group recited in claim 13. Accordingly, claim 24 does not further limit the subject matter of claim 13.

In addition, it is suggested that the recitation of "the dielectric oxide layer is comprises Nb<sub>2</sub>O<sub>5</sub>" in claim 24 be changed to --the dielectric oxide layer comprises Nb<sub>2</sub>O<sub>5</sub>--.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-24 recite a substrate coating. It is unclear if the claimed subject matter is a substrate coating which does not include the substrate or a coated substrate which include the substrate as part of the layered structure.

In claim 15, it is unclear if the "a dielectric oxide layer" is the same as the dielectric oxide layer recited in claim 13.

In claims 18-21 and 23-24, it is unclear if the "A substrate as claimed in claim 13" should be – The substrate as claimed in claim 13--.

In claim 22, it is unclear if the "Substrate as claimed in claim 13" should be – The substrate as claimed in claim 13--.

In claim 24, it is unclear if "the dielectric oxide layer" is the same dielectric oxide layer recited in claim 13 since claim 24 fail to further limit the scope of claim 13 as stated above.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13-15 and 17-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Coustet et al. (WO-2002/048065, its US equivalent, US 2005/0123772, is used as English translation).

Regarding claims 13-15, 17, 21, and 23-24, Coustet discloses a coated article comprising at least one transparent glass substrate provided with a stack of thin layers having an alternation of  $n$  functional layers and of  $n+1$  coatings composed of one or more layers made of a dielectric, so that each functional layer is placed between two coatings. Furthermore, at least one layer absorbent is inserted between two layers of dielectric of at least one of the said coatings. The absorbent layers may be NiCr nitride (NiCrN) or chromium nitride (CrN) layers (translation page 1, [0017]). The dielectric layers may be silicon nitride layers (page 2, [0019]-[0020]).

Coustet also discloses that at least one layer of an oxide (functional equivalent to the claimed dielectric oxide layer) of tin oxide, titanium oxide, silicon oxide, niobium oxide which is between the absorbing layer and the dielectric layer (translation page 2, [0023]).

Regarding claims 18-20, Coustet discloses that the thickness of silicon nitride is 21.5-31 nm and the thickness of dielectric oxide is 10 nm (translation page 3, [0043]). The absorbing layer has a thickness of less than or equal to 7nm (translation page 2, [0018]),

Regarding claim 22, Coustet discloses that the substrate can be a synthetic material (translation page 2, [0030]).

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coustet et al. as applied to claim 13 above, and further in view of Lingle et al. (US 2002/0064662).

As stated above, Coustet disclose the substrate coating structure comprising the same structure as recited in claim 13.

Coustet does not disclose that the substrate coating comprising a SiNx layer with x smaller than 4/3 as recited in claim 16.

Lingle teaches that a non-stoichiometric SixNy layer can be used as a dielectric layer in a coated article to reduce haze and/or improve mechanical durability (page 4, [0075]). The ratio of x/y may be from about 0.85 to 1.2.

Accordingly, it would have been obvious to one of ordinary skill in the art to use non-stoichiometric silicon nitride as the dielectric layer in Coustet's coated article in order to reduce haze and/or improve mechanical durability of the coated article.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling Xu whose telephone number is 571-272-7414. The examiner can normally be reached on 8:00 am- 4:30 pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Primary Examiner  
Art Unit 1794

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Lx  
December 31, 2008